Test and Calibration Instruments

- Pocket Calibrators
- Portable Calibrators
- Bench-Top Calibrators
- Process Signal Calibrator
- Micro-Ohmmeters
- Soldering Iron Tester

www.palmerwahl.com

PALMER Wahl
INSTRUMENTATION GROUP

Continued Innovation Since 1836

PW1210

03/07
Rev D

Pocket Calibrators
TC621 • TC622

TC621

TRACEABLE TO NIST

ONE YEAR 1 WARRANTY

Measurement and Generation
Rugged IP54 Construction for On Site Use
Process Control Simulation

User friendly and robust, the New Wahl **TC621** and **TC622** Pocket Calibrators are designed to simplify temperature transmitters and probes maintenance and commissioning. They feature **0.02% Accuracy** and measure and simulate Thermocouples or RTDs. Resolution is programmable for better reading by user with up to 1mΩ or 1uV.

Features

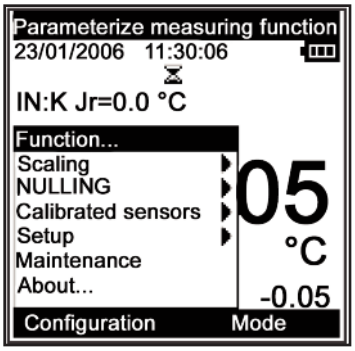
- **Well adapted for different process job procedures due to their wide choice of ranges and specific functions such as scaling and ramping**
- **High Accuracy: 0.02% of Reading**
- **Very low temperature coefficient: as low as 15 ppm / °C in thermocouples and 10 ppm / °C in resistance**
- **Accuracy is maintained even in harsh environmental conditions**
- **Measurement and Simulation of 14 Thermocouples and 12 RTD types**

For a complete selection of probes please visit www.palmerwahl.com and click: Hand Held Instruments > RTD Meters and Probes or Thermocouple Meters & Probes

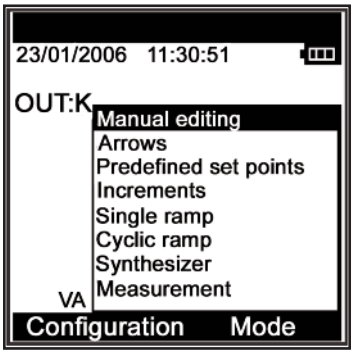
Graphic Interface for Programming

TC Series Pocket Calibrators use a graphic interface - making programming and reading easier.

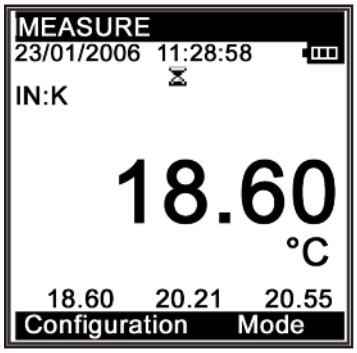
Function Menu



Operating Menu



Reading Menu



For complete specifications please visit www.palmerwahl.com and click: Test & Calibration > Calibrators: Temperature > Pocket Calibrators

*Buy it, you'll like it; GUARANTEED **

* USA Customers only

Calibration Services Available

PALMER Wahl INSTRUMENTATION GROUP
Continued Innovation Since 1836

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

03/07
Rev D

Portable Calibrators
C50 • C75 • C100 • C150

Superior Accuracy as compared to Competitors!

Ergonomic design and embedded software make these on-site multifunction calibrators an easy to use high performance tool.

Wide backlit Screen - Protected by a Polycarbonate Membrane

TRACEABLE TO NIST

ONE YEAR 1 WARRANTY

C Series Features for All Models

- Simultaneous Measurement and Generation
- Rugged IP54 Construction for On-Site Use
- Quick Connect Terminals
- Measure and Generate Voltage, Current and Resistance Signals
- Temperature by Resistive Probes and Thermocouples
- Frequency for Frequency Signals and for Dry Contacts

C75 Features

- Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure

C100 Additional Features

- Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure
- Laboratory Grade Accuracy

For complete specifications please visit www.palmerwahl.com and click: Test & Calibration > Calibrators: Temperature > Portable Calibrators

The new Wahl C50, C75 and C100 Calibrators integrate all the necessary functions for calibration and maintenance of processes.

Their ergonomic design and embedded software make them easy to use, high performance calibrators.

IP 54 rated, and fully protected by an anti-shock boot, with integrated quick connect terminals and a high-contrast backlit display, they are comfortable to use in all conditions.

C Series Calibrators are supplied with 6 testing leads with crocodile clips, quick battery charging system, neck strap, and stand for desktop use, User Manual on CD Rom, attache style professional carrying case, and NIST Calibration Certificate.

Buy it, you'll like it; GUARANTEED *

* USA Customers only

C150 Additional Features - Plus

- Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure
- 0.005% Accuracy over 1 year
- Software, HART Compatible
- Measurement and Simulation of Thermistances
- Dual Input Thermometer: IN and OUT or IN/IN

Calibration Services Available

Bench-Top Calibrator/Tester PJ6301

This product had been Discontinued

The PJ6301 calibrator/tester is a high-accuracy instrument: ± 0.005% with 600,000 measuring counts on voltage and current ranges; 0.05°C for thermocouple and 0.005°C for RTD measurement resolution.

- **50 ppm Accuracy**
- **Simultaneous Input and Output**
- **DC Voltage, Current, Resistance Temperature Sensors (RTD & T/C)**
- **RS232/IEEE488-2 Programmable**
- **Menu-Driven Design for Easy Use**

The model **PJ6301** calibrator/tester measures and simulates process signals. Its design incorporates outstanding performance with either manual configuration or computer operation for automatic test application.

PJ6301

Comprehensive: PJ6301 measures and generates or simulates process signals such as DC voltages and currents, resistance, and temperature signals from thermocouple or RTD sensors. Separated circuits allow simultaneous and independent measurement and sourcing.

Its graphic display is divided into two areas for simultaneous indication of measured and emitted values. Other functions, such as data processing, customized signal linearization, recorder analog output, transmitter function, ramp and step function, relative measurements etc. provide a wide and versatile application range.

Ease of Use: PJ6301 is offered in a compact housing for use on site, and may be bench top or panel mounted. The graphic display design allows for simplified keyboard functions. On-line help messages are available at any time when additional information for displayed options is required.

Programmable: PJ6301 is fully programmable via its RS232 and IEEE488-2 interfaces. With rack mounting accessory, it is ideal in test bench and automatic test equipment applications. In addition, the battery and memory storage capacity make the PJ6301 portable and suitable for on-site use.

Features and Applications

- Accurate measurement for calibration of signal generators: such as sensors, voltage and current sources, resistance, and for checking process control instruments.
- Temperature simulation, voltage and current sourcing, resistance simulation for calibration of measuring equipment: such as chart recorders, logic controllers, PLC analog inputs.
- Test of signal conditioners or transmitters, using PJ6301 simultaneous sensor simulation and output signal measurement capability.

For complete specifications please visit www.palmerwahl.com and click: Test & Calibration > Calibrators: Temperature > Bench Top Calibrators

Applications include:

- Engineering departments
- Quality-Control departments
- Research and Development Laboratories, also suitable for Instrument Maintenance and Approval companies
- Energy (Electrical, Gas, Oil, etc)
- Heavy Industry (Steel Work, Metallurgy, Chemical, Glass, Cement, etc)
- Textile, Paper, Wood, Rubber Industries
- Food Industry
- Pharmaceutical Industry
- Advanced Technology Industry (Aerospace, Military, Transportation, etc) • Scientific Research

PALMER Wahl INSTRUMENTATION GROUP
Continued Innovation Since 1836

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

03/07
Rev D

Process Signal Pocket Calibrator P32

Simple and robust, this instrument is designed to simplify maintenance operations and commissioning of sensors and transmitters using process signals such as 4-20 mA or 0-10V.

The Wahl **P32** Process Signal Pocket Calibrator has been designed with increased performance in order to meet the demands of today's higher accuracy transmitters and process sensors. Accuracy of 0.015% of reading allows the P32 to be used as a standard for on site operations. The P32 features adjustable display resolution to simplify measurements with maximum resolutions of 1 µA and 1mV.

P32

Features

- **Measurement and Simulation**
- **Rugged IP54 Construction for On-Site Use**
- **Quick Connect Terminals with 4mm Banana Plugs**
- **User Selectable Ranges and Scaling Provide Versatility for All Your Process Measurement Tasks**
- **High Precision: 150 ppm of Reading**
- **Low Temperature Coefficients: 15 ppm rdg/°C for Voltage, 20 ppm rdg/ °C for Current**
- **Accuracy is Preserved Even in Difficult Operating Conditions**
- **Measurement up to 50V**
- **Simulation up to 15V**
- **Measurement and Emission up to 25mA**

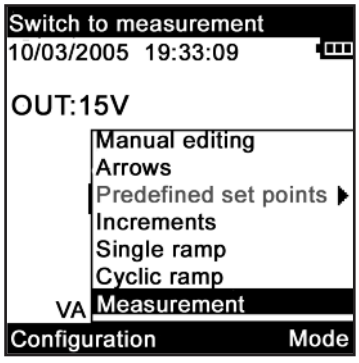
TRACEABLE TO NIST

ONE YEAR 1 WARRANTY

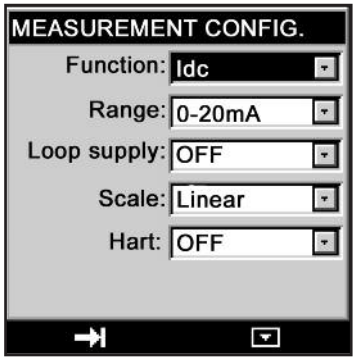
Graphic Interface for Programming

The P32 offers a graphic interface - making programming and reading easier

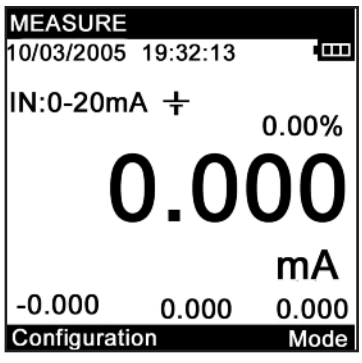
Operating Mode Screen



Function Screen



Reading Screen



For complete specifications please visit www.palmerwahl.com and click: Test & Calibration > Calibrators: Process Signal

Buy it, you'll like it; GUARANTEED *

* USA Customers only

Calibration Services Available

Micro-Ohmmeters
OM16 • OM21 • OM22

OM16
(Previously RM116)

Portable Micro-Ohmmeter

- **Low resistance value measurement in 4-wire configuration (0.1μΩ to 2500Ω)**
- **Measuring current adaptable to the measuring range from 10A to 100mA**
- **Inductive resistance measurement (coils, motors and transformers)**
- **Non-inductive resistance measurement of earth bonding, coating, contact resistances**

OM16 Micro-Ohmmeter is designed for outdoor or indoor use. Easy to use, it performs measurements on inductive and non-inductive resistances with a DC current. Its large interactive display informs the operator in real time about the type of measurement, range, calculation conditions (resistance calculated according to a reference temperature), thresholds status and values. Designed for harsh environments, it is encased in a Pelicase® type carrying case and features washable plastic keyboard and key-locked measurement plugs.

Bench-Top Micro-Ohmmeters

- **Programmable**
- **Four-wire resistance measurement of very low values**
- **Resolution of 0.1μΩ to 20kΩ**
- **Accuracy of 0.03% and a display over 26,000 counts**
- **Display of the measured resistance value reduced to 20°C**
- **Mains supply or rechargeable batteries**

OM21

OM21 Micro-Ohmmeter can be used for measurement of thermistors and heat-sensitive components. It can be powered from mains or from rechargeable batteries. The instrument is calibrated electronically, with no internal adjustment needed.

OM22 Micro-Ohmmeter is specifically designed for industrial test and pre-configured for each user, making its principal characteristic simplicity of operation. User selects one of 6 test programs (Factory Presets or User Programmable) to find the desired configuration. The instrument is calibrated electronically, with no internal adjustment needed. RS232/IEEE-488 programmable.

OM22

PC software allows programming of the OM21 or OM22 from a compatible PC. Menu-driven, completely guided by a question and answer system. Second function of the software is to manipulate the stored readings; transfer into the PC memory or onto a disk in a file which can be used for spreadsheets, tables or graphs.

For complete specifications please visit www.palmerwahl.com and click: Test & Calibration > Micro-Ohmmeters

PALMER Wahl INSTRUMENTATION GROUP
Continued Innovation Since 1836

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

03/07
Rev D

Soldering Iron Tester ST2200

Precise Thermocouple Sensors Simulate Actual Solder Joints - Verifies Soldering Iron Integrity

Simple and Repeatable, the Wahl ST2200 Soldering Iron Tester gives you a choice of interchangeable sensors designed for utmost accuracy. Includes TC800K Type K Wire Probe, WST-02B Sensor, Sensor Cleaning Brush, User Manual, and NIST Certification.

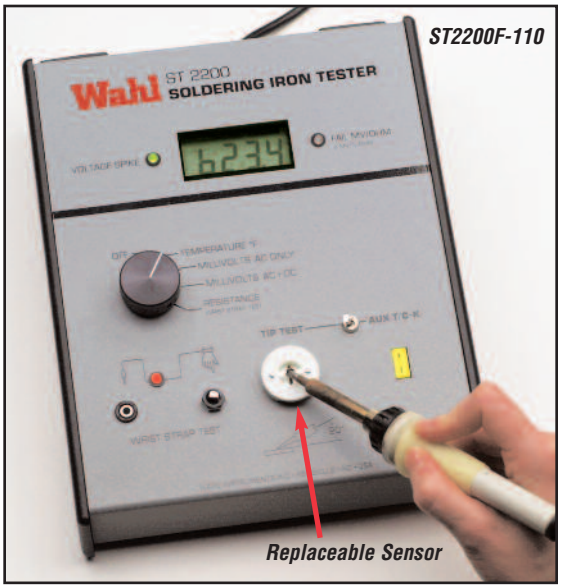
Specify: °F or °C, 110 or 220 VAC, North American or European Plug and Receptacle, or British Plug and European Receptacle.

- **MIL-SPEC compliant millivolts AC only test with pass/fail warning light for voltage** (see video at www.palmerwahl.com/test-tools.php)
- **Pass/fail warning light for resistance test, user selectable 2 or 5 ohms**
- **Output to recorder: 1 mV°F, 100 mV/mV, 100 mV/ohm**
- **Transient voltage spike detector detects transients over 100 mV and 1µs pulse width**
- **Built-in thermocouple connector for Type K probes, wire probe included**
- **Function selection switch for fast tests without moving the iron tip**
- **Auxiliary AC convenience outlet powers iron under test and insures common ground with the tester**
- **Comprehensive Operators Handbook with calibration instructions and troubleshooting guide**
- **ESD safe construction**
- **Wrist strap tester verifies strap integrity**

TRACEABLE TO NIST

MADE IN THE USA

THREE YEAR 3 WARRANTY



Specifications	
Temperature Range	50°F to 1300°F (10°C to 700°C)
Temperature Accuracy **Resolution**	Accuracy: ±0.1% of reading ±1 digit Resolution: 0.1°F or 1°F
Tip Ohms Range	0-99.9 Ω
Tip Ohms to Ground Accuracy **Resolution**	Accuracy: 0-20 Ω ±0.1 Ω 20-100 ±0.5% of reading Resolution: 0.01 **or** 0.1 Ω
Tip mV to Ground Range	0 - 30mV
Tip mV to Ground Accuracy **Resolution**	Accuracy: ±0.1mV Resolution: 0.01mV **or** 0.1mV

Kits, Replacement Sensors and Accessories

KST2200 Kit: includes ST2200 Soldering Iron Tester, TC800K Type K Wire Probe, (2) WST-02B Sensors, TC801P Solder Pot Probe, Sensor Cleaning Brush, User Manual, NIST Certification, and #12423-01 Carry Case. Specify °F/°C, 110/220VAC.

KST2203 Kit: Same as KST2200 but substitute (1) WST-03 Elevated Wire Sensor for (1) WST-02B.

Replaceable Thermocouple Solder Bead Sensors Provide excellent thermal transfer when the solder is melted by the iron and gives a good representation of effective working tip temperature.

WST-02 Sensor: high temperature Type K ribbon thermocouple, stainless steel support strap, solder bead and glass filled teflon body (housing). Measures tip temperature of most small (<1/8") conical, chisel and screwdriver type soldering tips, (shown on tester above). Heavy duty sensor. Small to medium tips 0.2 gram mass.

WST-02B Bonnet Sensor: Same as above, but with a "bonnet" which acts as a position stop to guide iron tips for repeatable measurements in the identical position. It also stabilizes the tip to prevent movement during measurement which can cause temperature fluctuations.

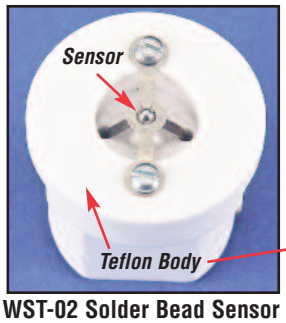
WST-03 Elevated Wire Sensor: welded thermocouple wire sensor, support posts and glass filled teflon body. May be used when the iron tip is not compatible with the WST-02 sensors. Allows the operator to measure temperature at an exact point on the iron tip. For all tip sizes.

Sensor Rebuilding Kits allows user to "rebuild" the sensor.

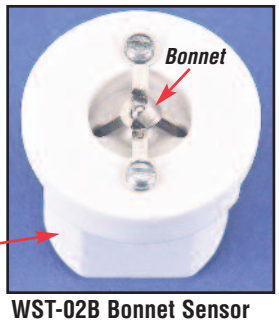
WST-02KIT: Rebuilding Kit for use with WST-02 Sensor, includes (1) Sensor, (4) Screws, (2) Plugs, and Instruction Sheet.

WST-02BKIT: Rebuilding Kit for use with WST-02B Sensor, includes (1) Sensor, (4) Screws, (2) Plugs, and Instruction Sheet.

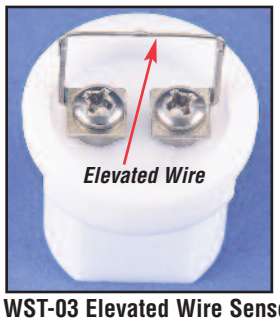
WST-03KIT: Rebuilding Kit for use with WST-03 Sensor, includes (**1**) Sensors, with supports, (4) Screws, Uses standard phillips head screwdriver. Teflon body or housing is not included in rebuilding kits.



WST-02 Solder Bead Sensor



WST-02B Bonnet Sensor



WST-03 Elevated Wire Sensor

WST-02RT: Repair tool kit for use with WST-02, -02B Rebuilding Kits. Includes fixture, removal tool and screwdriver.

12423-01: Carrying Case, Double walled, Foam-lined, 17" x 13" x 7-3/8".

TC867: Sensor Assembly for direct temperature measurement only, from a Heat Prober® Thermocouple Meter.

For Optional Probes please call Customer Service.

Calibration Services Available

PALMER Wahl
INSTRUMENTATION GROUP

America's First Manufacturer of Precision Industrial Temperature, and Pressure Instrumentation

Calibration Services

Wahl designs and manufactures to the most stringent quality standards. We provide certified, traceable calibration data in support of companies whose requirements include meeting ISO 9001, FAA and FDA quality standards. Calibrations to both IPTS-68 and ITS-90 are available. Choose from two levels of calibrations services to meet your quality system requirements.

STANDARD CERTIFICATION: Unit is calibrated to factory specifications using NIST traceable equipment. Unit is provided with:

Certificate of Conformance*- Statement that our product meets published specifications. Included when you buy a new product.

Calibration Sticker*- (or tag) Advising you of the date your instrument(s) was/were calibrated, and the suggested date for its next calibration. This is provided when you buy a new product and when you return a product for calibration. (*Most Products)

NIST TRACEABLE TEST REPORT: Unit is calibrated to factory specifications using NIST Traceable equipment. Unit is provided with:

NIST Traceable Test Report - Our quality Management system is certified to conform to ISO9001:2008. We maintain a calibration system in conformance with ANSI/NCSL Z-540 and MIL-STD-45662A.

TRACEABLE TO NIST

"As Received" and "As Left" Data with Out of Tolerance conditions noted.

Calibration Sticker (see above).

Repair and Other Services

REGISTER YOUR PRODUCT: Registration is fast and easy. In about a minute you can register your product for Warranty Protection and our Calibration Reminder Service to keep your QC Program in compliance. **Go to www.palmerwahl.com/register.**

REPAIR SERVICES: Palmer Wahl offers repair and calibration services on most products we sell. Contact Customer Service for pricing, and an RMA. Please see note below.

Detailed Repair Report - Available upon request, this report provides details of evaluation and repairs made.

Custom Points - Palmer Wahl will calibrate your instruments at your specified temperature or pressure.

Special Requests - When calibrating your instrument, our experienced personnel will help you to achieve the level of quality that you need in your facility.

Note: You must have a **Return Merchandise Authorization Number, (RMA)** before returning a product for repair or calibration. To obtain an RMA, please call Customer Service at 1-800-421-2853 or go to www.palmerwahl.com and click on: Service > Product Return Request.

Why you need a Wahl Calibrator for your business

- **Increase customer satisfaction with consistent products.**
- **To comply with quality standards.**
- **Improve product quality.**
- **Ensure traceability throughout your entire manufacturing process.**
- **Integrates all the necessary functions for adjustment and maintenance of your process.**
- **Our products are easy to use and Palmer Wahl is there to help, every step of the way.**

www.palmerwahl.com

Wahl Test & Calibration products are distributed by:

Palmer Wahl Warranty

Manufacturer warrants all products listed in this catalog to be free from defects in material or workmanship under normal use and service. The Manufacturer agrees to repair or replace any product which upon examination is revealed to have been defective due to faulty workmanship or material if returned to our factory, transportation charges prepaid, within the product specific warranty period stated in the catalog by the manufacturer. This warranty is in lieu of all other warranties, expressed or implied and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use or misuse of instruments sold by the Manufacturer. No agent is authorized to assume for manufacturer any liability except as set forth above.

234 Old Weaverville Road • Asheville, North Carolina • 28804-1260
Phone: (828) 658-3131 • Toll Free: (800) 421-2853 • Fax: (828) 658-0728 • Email: info@palmerwahl.com
www.palmerwahl.com

ISO9001:2008 Certified Quality Management System

PW1210 03/07 Rev D

Digital version of catalog may differ from printed version.